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AGRICULTURAL EDUCATION MONTHLY.

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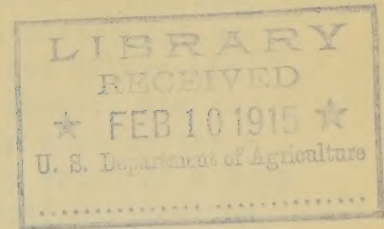


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USE OF THE HOME FARM IN AGRICULTURAL TEACHING.

Many teachers of agriculture prefer to utilize the home farm in their teaching than to establish farms in connection with the school. This fact was brought out in the investigation of the committee on the use of land, working in connection with the American Association for the Advancement of Agricultural Teaching, which was referred to in the January number of this Monthly. The committee in a previous report stated that it "desires to go on record as strongly favoring the utmost utilization of the home land of the pupils, the closest possible correlation of agricultural classroom instruction with home farm activities, and suitable provision for systematic and efficient supervision throughout the producing season." 1

A number of States have planned home work as a definite part of the course in agriculture and many schools have carried on this work in a successful way. It is the aim of this article to show the point of view taken in some of the States and to give an idea of what is being done in this line of work.

Advocates of home farm work for students advance the following as some of the advantages of such work over that done upon the school farm: Agriculture may be taught successfully in small schools if the home farms are utilized, while it would necessitate establishing schools to serve larger areas if they are to have sufficient funds to establish and maintain school farms. There is a great advantage in having the boy live at home. It is argued that the adolescent youth is more safe while living with his parents than he is while living at a boarding school. Many parents can afford to have their children attend school if they do not have to send them away from home. It is less expensive to board their children at home and they may have their services outside of school hours. It is also less expensive to teach practical agriculture upon the home farm than to establish school farms. Home work is adapted to the particular condition under which the boy is now living and where he will likely spend his life. School work on the home farm affords an excellent opportunity to bring the home and the school together in educational problems. It also affords an opportunity for the testing of general results such as those worked out at the State colleges and experiment stations under strictly local conditions. The teacher of agriculture is given an opportunity to demonstrate that his teaching is

practical. Such a demonstration wins the sympathy and loyalty of patrons in farm communities. Classroom and textbook instruction is worked out under actual farm conditions. The supervision of the instructor brings him in close personal touch with the student and his home environment; his teaching should become more vital with this association. In most of the work the boy develops judgment and a sense of responsibility which go a long way toward making him a man. He not only learns the practical application of the principles of agriculture, but he also learns the value of money, and what it represents in honest toil. One of the greatest lessons a boy has to learn in this commercial age is the value of a dollar; how to earn it, how to save it, and how to spend it wisely.

The phase of home work which we are to consider at this time is known as home-project work. Home projects may be correlated with club work and contests, but differ in that they are primarily a part of the regular school course in agriculture, and while financial rewards and other prizes may be gained the chief rewards are the training the work itself gives and the school credit which represents it.

In Massachusetts, New York, Pennsylvania, New Jersey, and Indiana, a distinction is made between agriculture as ordinarily taught in elementary and high schools and vocational agriculture. Vocational agriculture is essentially of a practical nature intended for those students who have decided to become farmers. All of the States mentioned contribute State funds towards vocational teaching. Home projects considered are an essential part of vocational agriculture. The plan as worked out in Massachusetts is the result of applying the part-time idea in industrial training to vocational agriculture. The plan was first tried at Smith's Agricultural School, Northampton, Mass., in 1908-9. The annual report of the Massachusetts Board of Education for 1912-13 gives a list of four schools and eight departments which have been approved. While there were but 69 pupils doing project work in 1912 and 77 in 1913, 266 were admitted to such training for 1914. In 1913, 30 students while maintaining good standing in the classroom, earned nearly \$10,000 from farm work. (See U. S. Bur. Ed. Bul. 579 (1914), for an exposition of the Massachusetts plan).

The following is from one of the bulletins of the Pennsylvania State Department of Public Instruction:

"The project work is an essential part of the course of study. It is largely this work that places the agricultural instruction on a vocational basis. It furnishes the opportunity to connect the work of the school with the life of the farm, for the projects are usually carried out on the home farm rather than at the school. This close cooperation of the school and home increases the efficiency and service of the former as it brings it into closer touch with the daily home activities of the pupils.

"Most of the projects should be individual projects rather than group projects. There are some things that may be undertaken by the class as a group. This is true of some projects carried out on the school grounds, such as care of demonstration plats, test plats, beautifying of school grounds, concrete work, etc. But the principal projects should be carried on by the individuals of the class and usually on the home farm.

"A careful survey of the farm and home conditions of each pupil should be conducted by the teacher of agriculture before the selection of any project by the pupil, and in order that the hearty cooperation of the parent may be secured frequent conferences between teacher, parent, and pupil should

precede this selection of the project.

"One boy will undertake the entire care of a flock of poultry having a definite aim in view in so doing. Another will wish to set out and care for a small orchard. The raising of a crop of corn will be the work of another. The survey and the conferences will be the means of determining the boy's choice.

"There shall be a close correlation between the work in the classroom and laboratory and the work connected with the project. A careful study of the work to be undertaken must precede the work itself.

"A report covering the work to be undertaken in a project, and giving the aim or purpose of the same, shall be submitted by the teacher of agriculture to the Vocational Division of the Department of Public Instruction as soon as plans for project are prepared and before said project is started. This is in order that approval of said plans may be secured.

"A daily record will be kept by each pupil during the course of the project. The daily record will show amount of labor and money expended, methods employed, and results noted. This will include a daily weather record.

"A complete record is to be drawn up by each pupil when the project has been brought to a termination. These records are to be sent as promptly as possible to the Vocational Division of the Department of Public Instruction, as the approval of any school or department of agriculture will be withheld until evidence is presented that satisfactory project work has been carried on.

"Teachers of agriculture in agricultural schools or departments should be employed for a term of twelve months, as the most important part of their supervision and instruction is in connection with the project work, the greater part of which will be carried on during the growing season. This makes it imperative that the teacher of agriculture be employed during the summer months as well as during the period of the year when most of the school work is carried on.

"His summer work will consist of supervision of project work and instruction in connection therewith. His assistance should be as freely given to boys who are not enrolled in the school, but are carrying on project work, as it is to those who are enrolled in the school."

An idea of the New York point of view will be gained from the following quotation from a bulletin of the University of the State of New York: 1

"The provision for an additional apportionment to each school which contracts with the teacher for an entire year makes possible an effective teaching plan. In these small schools many of the pupils return home each night and those who board in the village return home each Friday night. The home farms are used for demonstrations and practicums. The school furnishes an opportunity for a study of the science underlying the home work and related to it. Each pupil then has a productive project under way at home while in school he is studying the science underlying that project. It is expected that the parents, the boy, and the teacher will cooperate in this project, the parents and the teacher each contributing to the educational possibilities of the boy and the boy taking advantage of these possibilities. Undoubtedly we have in some instances been too hasty in assuming that certain home opportunities for education have ceased to exist. During the spring and summer especially, there is splendid opportunity for the farm boy to make a real connection between the home and the school. It is quite evident then that the teacher should make frequent visits to the homes of the pupils in order that his advice and counsel may be available. The teacher of agriculture

1 Univ. State N. Y. Bul. 566 (1914), p. 28.

who spends the summer in close contact with the farm homes of the community goes back to the schoolroom in the fall with a much better idea of what and how to teach than he had previous to such an experience. During the summer the teacher has an opportunity to gather material of various kinds for his winter's work in the schoolroom. In passing about through the country he dispels some of the misconceptions concerning school agriculture and last, but not least, he puts his knowledge and skill at the disposal of the community.

"There have been varying and various ideas concerning the acquirement and use of land by schools of agriculture. Some States have included in the legislation concerning State aid, a stipulation that a certain minimum acreage of land be cultivated as a school farm. The consensus of opinion now seems to favor the use of home land as a first consideration and the use of land in connection with the school as a matter to be determined by local conditions."

The following regarding home work is from a publication of the Indiana Department of Public Instruction: 1

"Each pupil in the day classes of the vocational agricultural school or department must select a line or lines of practical farm work to be pursued at home during winter and summer as an integral part of his course of study. The teacher must submit to the State board of education, within three weeks after the beginning of the school term, an outline of the home work to be pursued by each pupil. With each outline must be given the name, age, post-office address, and general home conditions of the pupil who is to do the work.

"The projects for the winter months may consist in feeding swine, sheep, cattle, or poultry for market; feeding poultry for egg production; caring for a dairy cow and her products; caring for a team of horses or a brood sow; selecting, testing, and grading seeds for farm crops; poultry hatching, etc.

"Most of the above-named projects are suitable for summer. To these may be added corn growing, gardening, canning fruits and vegetables, marketing farm products, small fruit growing, etc.

"Both the winter and the summer project work must be personally supervised and inspected by the agricultural teacher. Each pupil must keep a careful record of his home work and must make a written report to be submitted to the State board of education upon the completion of the project."

A number of States which do not have separate vocational schools and which do not make home work a requirement for State aid appreciate the value of such work and advocate it for their high schools. The following is from a bulletin issued jointly by the State Department of Education, the University of Texas, and the Agricultural and Mechanical College of Texas: 2

"There is great opportunity for the teacher of agriculture to accomplish valuable results with his students in so-called project work or part-time work. The term part-time indicates that part of the work of the student is done in school and part out of school. A certain project is undertaken by the students under the supervision of the teacher. The scientific principles involved are carefully studied, and plans are outlined in detail; the work is done, observations are made, notes are recorded, and a complete report of the project is submitted to the school. The student, assisted by the expert advice of his teacher, has put into practice on his own farm or on the school farm under a specific set of natural conditions, certain principles involved in his agri-

1 Dept. Pub. Instr. [Ind.] Ed. Pubs., Bul. 7 (1914), p. 13.

2 Joint Bul. State Dept. Ed., Univ. Texas, Agr. and Mech. Col. Texas, No. 1 (1914), pp. 24, 25.

cultural course.

"This sort of work is thoroughly practical and will serve to rob the pessimist's derisive "back farming" of its stigma. Project work puts the boy into actual farm problems, where more or less expenditure of money is necessary and where incomes may be expected. School work assumes an appearance of business life that proves very attractive to the adolescent.

"Some project work could be completed during the school session, but much of it will continue into or through the summer. This makes it very important that the teacher should be employed for the year, so that he may supervise his students' projects during the summer as well as during the school session.

"The giving of school credit for project work is a matter that the individual teacher must work out for his school. Each agricultural subject may be made to include a certain amount of project work, just as it includes laboratory work. Credit in the subject may be withheld until the project has been finished and reported. An extra number of units for graduation may be adopted--eighteen instead of sixteen, for instance. The additional two units may be made by taking subjects in the curriculum, by doing some project work, or by doing some other work out of school, but with the approval and under the supervision of the school, such as music, art, printing, painting, etc. Still another method is to allow honor credits as special distinction for the students who have done work in addition to the work in the curriculum.

"The project work may be divided into three general classes: (1) Production, (2) demonstration, and (3) improvement. In some cases the project may include all of the features. A few examples of this kind of work are listed below. These will suggest many more.

"Production projects:

1. Growing an acre of corn, cotton, tomatoes, potatoes, etc.
2. Developing an acre of alfalfa.
3. Starting an orchard--peaches, figs, plums, etc.
4. Producing a berry patch--strawberries, blackberries, etc.
5. Pruning, spraying, and managing an orchard.
6. Care of a dairy cow.
7. Care of 25 hens for egg production.
8. Growing chicks for market.
9. Care of brood sow and litter.

"Demonstration projects:

1. Use of lime on land.
2. Grafting and budding certain kinds of trees.
3. Treatment of oats for smut.
4. Treatment of potatoes for scab.
5. Testing new varieties.
6. Comparison of sprayed and unsprayed orchards.
7. Comparison of different rations.
8. Deep and shallow cultivation.

"Improvement projects:

1. Developing a lawn.
2. Planning and executing a landscape design.
3. Cement work,--walks, posts, troughs, etc.
4. Replanning a farm.
5. A plan for water system, bath, and sewage in farm home.
6. Construction of buildings, gates, etc."

A Wisconsin University Bulletin makes the following suggestions regarding home projects and their place in the high school course: 1

"Instruction in agriculture differs materially from that of any other high-school science in that much of the laboratory work must be done outside of school. Unless the theoretical instruction given is carried over into actual practice the work in agriculture will lose much in effectiveness. This condition has given rise to the practice of employing the teacher of agriculture by the calendar rather than by the academic year for the joint purpose of supervising and assisting with home projects by students and cooperating with farmers in local field trial and demonstration work on their own land.

"There are three essentials to the success of a home project, viz:

- I. Classroom study.
- II. Laboratory exercises at school relating thereto.
- III. Home work.

Suggestive List of Home Projects.

- I. Plant Production.
 1. Potato culture, 1/4 to 1 acre, in potato districts.
 2. Alfalfa culture, 1/20 to 1/4 acre, on upland soils.
 3. Clover growing, 1/20 to 1/4 acre, on sandy soils.
 4. The production of 1 acre of all the cereals, each in itself a separate project.
 5. Establishing an orchard, on the home farm or in fruit region.
 6. The culture of 1/20 to 1 acre of all the truck crops in the vicinity of good markets, each in itself a separate project.
 7. The production of a definite area of small fruits, each a separate project.
- II. Animal Husbandry:
 1. The keeping of feed and milk production records of the home herd.
 2. The calculation and feeding of improved rations, with records of results obtained from their use.
 3. The care and management of the home herd of cattle, sheep, or swine, each in itself a separate project.
 4. The care and management of the horses used on the farm.
- III. Soil Projects:
 1. Preparation of the land for the farm crops, each in itself a separate project.
 2. Soil fertility tests.
 3. Fertilizer plat trials.
 4. Laying out or installing a drainage project, or both combined."

A detailed outline suggestive of a home project in corn culture for an acre plat will be found also in this bulletin.

In Iowa Home Work School Credit Clubs are organized and instructions issued from the State college regarding their work. Recent instruction sheets would indicate that the work is mostly with students of the elementary schools, but some specific projects are suggested for which high-school credit is to be given.

A recent report on agriculture in the high schools of Michigan has the following concerning home projects: 1

"In order that practice may be combined with theory the classroom work and laboratory work done during the year is supplemented during the summer season by home projects. A list of suitable projects connected with the subject which has been studied during the year are placed before the students and each selects the project which he can best work out, or which may be of most

interest in his home community. Boys and girls who live in town also select the projects and either work them out on a small scale on village lots or on land outside rented for this purpose. Some projects, of course, are not connected with crop raising, but are of a character which can be worked out at home or in the shop.

"The following will indicate the character of the projects which are being worked out during the summer season. The growing of the following crops: Corn, potatoes, alfalfa, and tomatoes. Also the care of an orchard of three acres; milk records of five cows; beautifying the home grounds; determining the cost of production of potatoes; the planting of a young orchard; growing one-fourth acre of cucumbers; care and development of poultry on the farm; growing four acres of corn. To these should be added projects for the girls: Baking, sewing, growing tomatoes, flower gardens, and small fruit culture.

"According to the statistical table approximately 500 boys and girls who are connected with high schools are working out home projects during the summer of 1914. It should be stated in connection with the school at Ontonagon that this is a township district and the boys and girls of the entire township, which is half as large as the ordinary county, are engaged in this work.

"The home-project work has its intensely practical educational value and at the same time it is distinctly vocational. Frequently it will assist the boy to determine the question whether he desires to become a farmer. The actual commercial value of the products to be raised, of course, can not be stated at this time, and as this is the first year since home projects have been particularly recommended we are unable to give any figures as to the value of the products. The working out of the home project always develops a deeper interest in agriculture, and a keener insight and appreciation of the processes and the purposes of farm operations."

The following is from the superintendent of one of the schools of agriculture in Minnesota: 1

"School farm demonstration work alone does not cover the entire work with land. What the school farm can seek to do has been pointed out. Naturally the field is a restricted one. The limitations of the work have been realized by many who wish to extend the benefits of high-school agricultural teaching as widely as possible. They have turned to other plans to supplement the work of the school farm. Home-project work both for demonstrational and for practical purposes, as well as work on the farmers' own farms under direction of the agricultural teacher, is the means employed. The work is new. Out of nearly 150 replies received, only about a dozen report that home-project work was required during the last season. Most of them say, however, that they 'intend to require it,' or that 'it will be encouraged,' or 'it will be optional.' Those schools that have begun home-project work state that it is their most successful venture. Several schools report that they have given up their school land and have substituted home-project work and work with farmers on their farms instead. Several new schools, just beginning, are hesitating between the school farm and this other plan.

"After two years of experience with home projects, I am confident it will become a very effective work when it is properly organized. Every line of demonstrational work that can be carried on on the school farm can be made a home project. It has greater value if done by a farmer's boy at his home than if done at the school farm. Persons who have thought much about the

information is being furnished to the public. It is the policy of the Department to make available to the public all information in its possession, except where the release of such information would be contrary to the public interest.

The Department is also committed to the principle of transparency. It will make available to the public all information in its possession, except where the release of such information would be contrary to the public interest. This includes information about the Department's activities, its personnel, and its financial affairs. The Department will also make available to the public all information in its possession, except where the release of such information would be contrary to the public interest.

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psychology of demonstrational work know that such work done by the National Government, the State experiment stations, or the schools has less effect than if done on actual farms by farmers themselves.

"If alfalfa is a good crop to grow, it is advisable to have it grown on the home farms as well as on the school farm. Landless boys can be allowed to use the school farm in lieu of land of their own. The home-project work will naturally include other lines than work involving the use of land, but these lie outside the scope of this discussion. The projects should be graded very carefully and choice allowed between groups requiring equal work. Cost accounting, a complicated subject in school farm work, which is, however, a most important item in agricultural production, can easily be secured in individual home-project work."

The Agricultural College Extension Department of the University of Illinois has issued a circular giving suggestive projects: Home Projects for School Agriculture, Agr. Col. Ext. Univ. Ill. [Circ.], 1913, Mar.

SOURCES OF INFORMATION FOR TEACHERS OF AGRICULTURE.

All teachers of agriculture should receive the Monthly List of Publications issued by the U. S. Department of Agriculture. 1. Many of the Farmers' Bulletins are of direct interest to teachers. The following are recent numbers of interest: Farmers' Bulletin 586, Collection and Preservation of Plant Material for Use in the Study of Agriculture.

Farmers' Bulletin 606, Collection and Preservation of Insects and Other Material for Use in the Study of Agriculture.

Farmers' Bulletin 612, Breeds of Beef Cattle.

Farmers' Bulletin 617, School Lessons on Corn.

Farmers' Bulletin 619, Breeds of Draft Horses.

Lists of Government publications which are for sale may be obtained by addressing the Superintendent of Documents, Government Printing Office, Washington, D. C. The numbers and titles of those pertaining to agriculture are as follows:

Price List 16. Secretary's Office, Department of Agriculture.

" " 23. Dairy Industry.

" " 31. Education.

" " 38. Animal Industry Bureau.

" " 39. Biological Survey.

" " 40. Chemistry Bureau.

" " 42. Experiment Stations Office.

" " 43. Forest Service.

" " 44. Plant Industry Bureau.

" " 45. Public Roads Office.

" " 46. Soils Bureau.

" " 47. Statistics Bureau.

" " 48. Weather Bureau.

" " 52. Poultry: Birds.

Teachers who have access to the published Proceedings of the National Education Association will find much of interest in its Department of Rural and Agricultural Education.

1 This list and the publications it announces may be had as long as the Department's supply lasts on application to the Editor and Chief, Division of Publications, U. S. Department of Agriculture, Washington, D. C.

